Vol. 7 No. 2 Fall 2002

THE NORTHLAND SKY WATCHER

For National Weather Service weather watchers of northeastern Minnesota and northwestern Wisconsin

Department of Commerce Awards Bronze Medal to Duluth Weather Service Forecast Office

The U.S. Department of Commerce has awarded its Bronze Medal to the Duluth Weather Forecast Office of NOAA's National Weather Service for outstanding public service during a devastating June 18, 2002, tornado in Burnett County, WI. Warning Coordination Meteorologist Carol Christenson and Senior Meteorologist Dean Melde accepted the award on behalf of the office during an Oct. 22 ceremony in Washington, D.C. Retired Navy Vice Adm. Conrad C. Lautenbacher, Administrator of the National Oceanic and Atmospheric Administration, presented the award.

The Duluth Weather Forecast Office was commended for providing a tornado warning to residents of Siren, WI, 51 minutes before an F3, half-mile-wide tornado hit the town and leveled a residential neighborhood. "Timely and accurate warnings from the National Weather Service and excellent communications with emergency personnel and trained Skywarn spotters contributed to the fact there were no deaths in Siren due to the tornado," the award citation read.

Dean Melde and Carol Christenson with the Department of Commerce Bronze Medal.

The Bronze Medal is the third highest award presented annually by the Department of Commerce in recognition of employees, groups, and offices that have made significant contributions to the public.

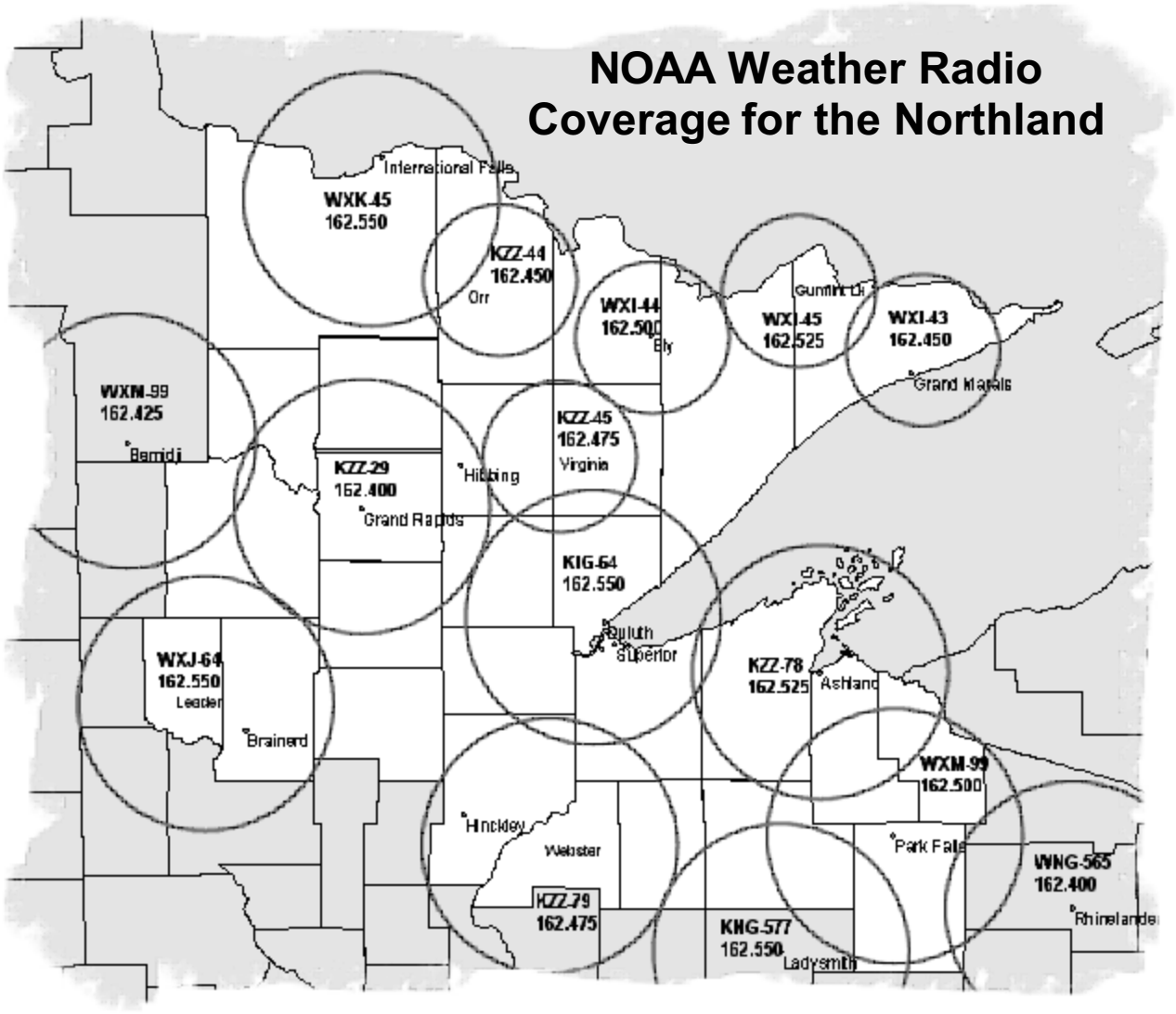
In this issue:

NOAA Weather Radio Coverage Still Expanding

Weather radio coverage continues to expand in the northland with two new additions this fall. KNG-577 in Ladysmith, WI began broadcasting weather at 162.55 MHz just a few weeks ago. This transmitter serves Barron, Chippewa, Price, Rusk, Sawyer, Taylor, and Washburn counties.

A station in Rhinelander, WI, WNG-565, began broadcasting on 162.400 MHz in early October. WNG-656, programmed by the Green Bay weather service office, broadcasts weather information for Vilas, Oneida, Price, Lincoln, Langlade, and Forest counties.

In northeastern Minnesota, NWR expansion is closing in on our goal with two transmitters left to install. A transmitter is on order for the Aitkin area. You can expect to hear a weather broadcast in that area by the end of the year. A weather radio transmitter will be installed in the Finland area in the Arrowhead. The site needs quite a bit of prepping, so we don't expect to have the transmitter installed until next spring.



Aviation Newsletter Pleases Pilots

Sneak up on senior forecaster Craig Sanders while he's engrossed in a project and many times you'll find him fine-tuning the graphics for a newsletter he co-edits with two other NWS forecasters.

The on-line newsletter, *The Front*, is specifically tailored for the experienced pilot, although anyone interested in the weather may find it good reading.

The Front

According to Sanders, "For weather nuts, *The Front* is right up their alley".

The Front made its debut in January 2002 and has received high marks from commercial pilots. Sanders saw a need for a special aviation newsletter when he realized there were newsletters for spotters, cooperative observers, and other weather service customers, but none for pilots to help them keep abreast of changing technology and new products.

The Front's snazzy three-dimensional graphics "puts substance into invisible weather features". Take, for instance, pressure. The current edition of *The Front* tackles the complicated concept of atmospheric pressure and the different ways to express it- altimeter, station, mean sea level, and density, and makes it understandable- no small feat. Sanders' 3-d computer-generated graphics show the wavy pressure fields as they course around the earth.

Other editions included pre-flight planning strategies, thunderstorm formation, stability indices, gravity waves, and convective products. Future editions will cover icing, turbulence, interpreting satellite imagery, how radar works, and how lows form.

You can access *The Front* at
http://aviationweather.gov/front/

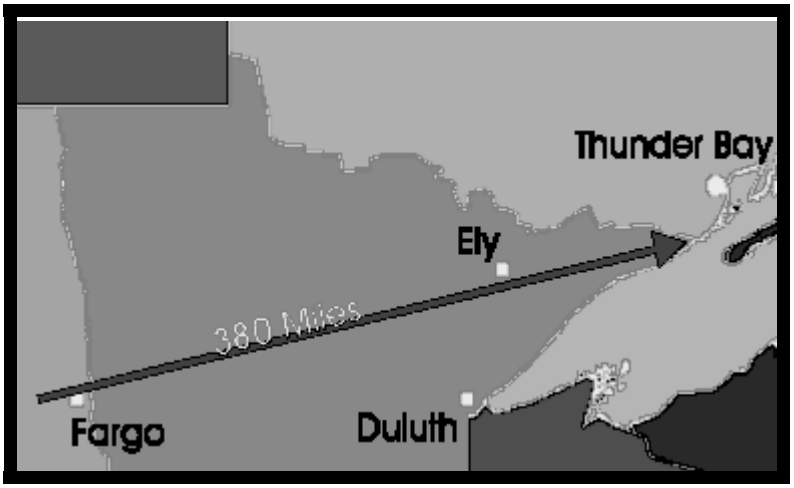
BWCA Blowdown Featured in Video

The American Museum of Natural History in New York City has completed a three minute video about derechos, featuring the huge derecho that raked through the Boundary Waters Canoe Area Wilderness in far northeastern Minnesota on July 4, 1999. This "Earth Bulletin" video features three National Weather Service meteorologists from WFO Duluth, MN: Mike Stewart, Carol Christenson, and Ed Shimon.

The crew from the AMNH visited late summer 2001 to investigate and film the video. They followed Christenson as she conducted a Skywarn Spotter training session on the Gunflint Trail, in the heart of the "blowdown area" of the derecho. The crew also spent time in the NWS office to learn more about derechos.

The video is part of an interactive kiosk in the museum's "Hall of Planet Earth". This video and kiosk is available to museums nationwide. Currently the McClung Museum in Salt Lake City, UT is featuring the video.

You can view the derecho video at
http://earthbulletin.amnh.org.



The July 4, 1999 Derecho track across northern Minnesota. The storm hit Fargo around 8:00 am and exited the northeast tip of the Minnesota Arrowhead around 2:00 pm.

New Faces at the NWS

Roman Berdes recently joined our ranks as a forecaster. He came to us from Glasgow, MT where he started as an intern and then was promoted to forecaster.

We introduced **Cammye Sims**, our new meteorological intern, in our last edition of the *Northland Sky Watcher*. She hadn't arrived on station yet when the newsletter was sent out, so now that we have had a chance to get to know her, you might like more about her, too.

She arrived to us fresh from obtaining a degree in meteorology. Cammye's main responsibility here is to train, but she has found time to take over the snowfall program manager duties.

Check It Out!

The National Weather Service is providing another product to tell you of hazardous weather. On October 1, we began issuing a new daily product called the Hazardous Weather Outlook (HWO). We use the HWO to alert you to ongoing and forecast weather hazards through the next seven days.

While the previous HWO we issued only pertained to thunderstorms for that day, the new HWO encompasses all hazards, including severe thunderstorms, floods, drought, winter storms, extreme cold or heat, high winds, and fire weather dangers.

The new and improved HWO is issued daily between 7:00 am and 7:30 am year round, with updates as necessary. You can access the HWO on our website at www.crh.noaa.gov/dlh. You can also listen for the HWO on your favorite NOAA Weather Radio station every morning.

Come visit us at the Duluth Sport, Boat, and Travel Show February 12–16!

El Niño To Affect Our Winter

National Weather Service Predicts Warmer Than Normal Winter

The NWS is predicting that the El Niño conditions will provide the northland with a warmer than normal winter with normal precipitation.

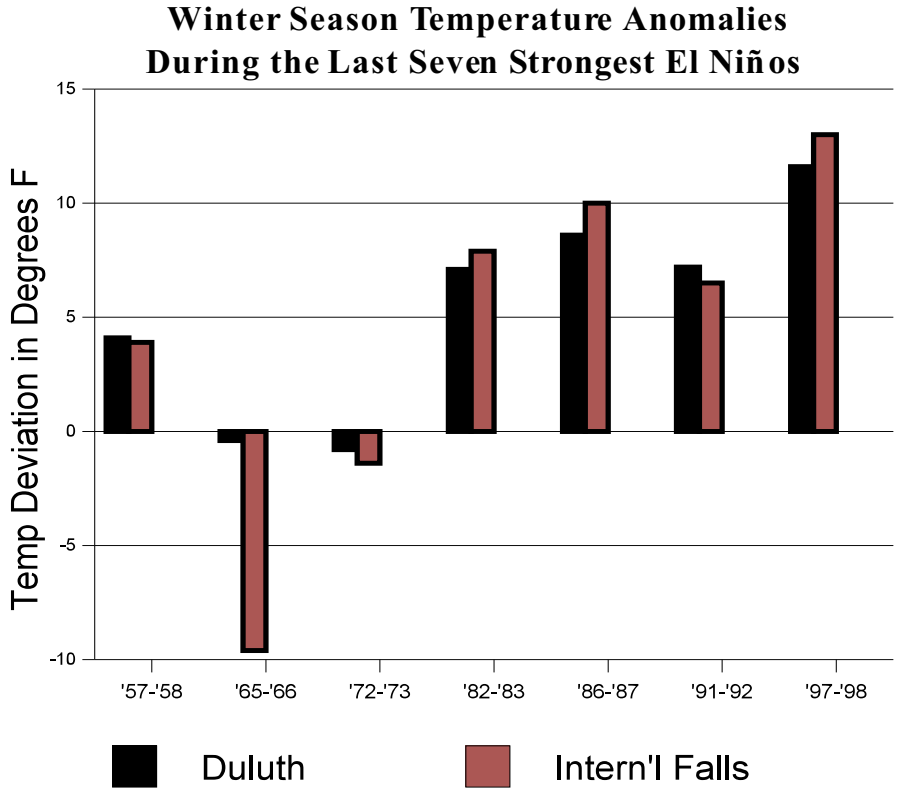
El Niño is the abnormal warming of the sea surface temperatures of the eastern Pacific Ocean. El Niños are somewhat cyclic, occurring every 2 to 7 years. Sixteenth century Peruvian fisherman noticed El Niño's effects on their dwindling catch around Christmas time, hence the Spanish name meaning "boy child".

NOAA scientists classify the current El Niño's intensity as moderate with a 1° C rise in sea surface temperatures, but are watching closely for any further strengthening.

During a typical El Niño winter, temperatures in the Midwest are warmer than normal. In Duluth, a check of the past fifteen El Niño winters shows an average temperature departure of +2.9 ° F while International Falls averaged 1.6 ° F above normal. The most recent strong El Niño of '97-'98 provided the northland with an extremely warm winter with Duluth's average winter temperature a whopping 11.6 ° F above normal and International Falls 13 ° F warmer than average.

Snowfall doesn't behave in such a predictable manner during an El Niño winter. During the past fifteen El Niño winters, snowfall has averaged 5.6" below normal, but the fluctuations have been large: from 22" below normal to 22" above normal.

The strongest El Niño on record was in 1982-83 when the sea surface temperature rose 3.1° C. That El Niño was blamed for 2,000 deaths and $10 billion in damage globally from droughts and fires, floods and landslides, and tornadoes and other wind storms.



TALES FROM THE ICE BOX

Here are some interesting winter tidbits gleaned from the NWS archives of climatology for International Falls, MN, known as the "nation's icebox". Warning- you may wish to prepare a cup of cocoa before reading this!

Coldest temperature:	**-46° F on January 6, 1968**
Number of consecutive days:	
Temperature below zero:	**14 days, from January 2-15, 1912**
Temperature -30° F or colder:	**7 days, from January 2-8, 1968**
Temperature -40° F or colder:	**3 days, from February 18-20, 1966**
Greatest storm snowfall total:	**24.1" from January 9-12, 1975**
Earliest snowfall:	**September 14, 1956 and 1969**
Latest snowfall:	**June 3, 1969**

The winter solstice will occur on December 21 at 7:14 pm CST.

The Co-op Corner

Snowfall Entries on the B-91

The winter season always brings headaches to the cooperative observer, as well as the person who goes through the quality control procedures before sending the forms to the National Climatic Data Center in Asheville, NC.

The main thing I check on the quality control is to ensure the proper format for entries has been followed in accordance with the instructions contained on the cover pages of the B-91 pad, and not to dispute your temperature and precipitation entries. Snowfall always presents a problem in determining the amount for the day and the water equivalent contained in that amount of snowfall.

A small snowstorm gave us an opportunity to brush up on our snowfall observing techniques. Overall, the October reports looked pretty good, with only a few conversion errors. As we get deeper into the winter months, I will send a copy of each station's B-91 back to them, annotated in "red" with any changes I needed to make in order for the entries to be in compliance with the required format. Also, as we go through the winter months, snowfall and water content become especially important in forecasting spring runoff and flooding situations. Please review the cover pages of the B-91 pad for entry procedures.

I hope everyone has a safe, enjoyable winter, and a happy holiday season.

-Bill Carroll, C-op Program Manager

The NWS Loses a Longtime Observer

Roger "Dick" Langham of Stone Lake, WI, a NWS cooperative observer for twenty-seven years, passed away last June. Dick's climate station was officially Couderay 7W.

The collection of climatological data for the Couderay station began in 1941, with Dick taking over the duties in 1975.

The Northland Sky Watcher is a newsletter published by the National Weather Service Office in Duluth, MN for our weather spotters and observers. We welcome your questions and comments. We can be reached by:

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